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On-site Packaging and Transportation Safety Standard

Dennis Barrett

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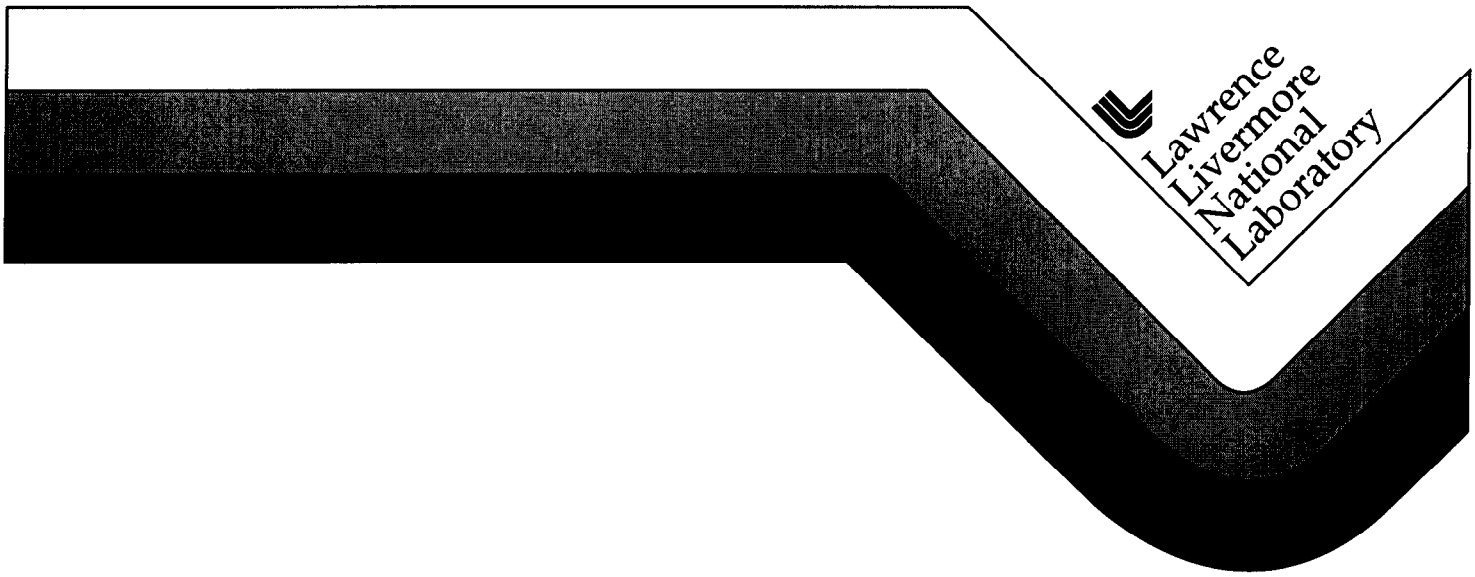

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Lawrence Livermore National Laboratory

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Hazardous Materials Packaging and Transportation Safety Assurance Office

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Preface

The On-site Packaging and Transportation Safety Standard is one of several local Lawrence Livermore National Laboratory (LLNL) environmental, safety, and health standards that was prepared during the Work Smart Standards Closure Process to address areas not adequately covered by Department of Energy orders or national consensus standards. The original version was approved on March 16, 1999. Questions or comments about this standard should be addressed to the Hazardous Materials Packaging and Transportation Safety Assurance Office.

Lawrence Livermore National Laboratory

On-site Packaging and Transportation Safety Standard

1.0 Purpose

On-site packaging and transportation activities are those performed within the *geographically contiguous* private property owned by or under the control of LLNL. Because these activities are not regulated by the U.S. Department of Transportation (DOT), the Laboratory has developed this standard for safe on-site packaging and transportation based on elements of the national standards listed in Section 5.0.

2.0 On-site Packaging Criteria

Hazardous and nonhazardous materials that are transported on site must be packaged so that the contents are retained during transport and not released to the environment in an uncontrolled manner. Information about the hazards and contents of a package is communicated to package handlers, transport personnel, and emergency responders via electronic messages or labeling, marking, or other written information attached to the package.

3.0 On-site Transportation Criteria

Hazardous and nonhazardous materials must be transported on site in a manner that protects the health and safety of everyone working at LLNL and the public, and that prevents releases of these materials into the environment.

3.1 Vehicle Operations

The requirements for all vehicle operations at LLNL are based on relevant elements of the California Vehicle Code, such as:

- Possession of a valid driver's license for the type of vehicle being operated.

- Enforcement of regulations and issuance of citations for
  - — Moving violations (e.g., ignoring traffic signs or exceeding posted speed limits).
  - — Parking violations (e.g., ignoring vehicle-space categories or time limits).

On-site requirements for LLNL's commercial drivers are based on applicable elements of the DOT "Federal Motor Carrier Safety Regulations," 49 CFR 300-399. The DOT requirements are supplemented by the Laboratory's internal documents governing these activities.

All operators of vehicles on site must have on their person a valid driver's license issued by their state of residence for the type of vehicle they are driving and the material being transported (unless they are excepted from these requirements by LLNL policies and procedures).

3.2 Vehicle Safety Requirements

Vehicles used on site must meet the minimum safety requirements established in LLNL's internal safety documents. Because there are no national consensus standards for on-site transportation activities, the Laboratory has identified minimum safety requirements for on-site vehicle operations. These requirements include

- Driver inspections of LLNL-operated commercial motor vehicles.
- Periodic maintenance of vehicles used to transport certain categories of hazardous materials on site.
- Regular inspection and maintenance of all LLNL-operated vehicles.
- Tie-down of material.
- Use of seat belts.

3.3 Transportation of Hazardous and Nonhazardous Materials

Transportation of hazardous and nonhazardous materials on private property is not regulated by DOT, so the Laboratory has established minimum safety requirements for transporting these materials on property owned or controlled by LLNL. On-site transportation safety requirements describe site boundaries excepted from DOT authority, identify hazardous materials subject to site controls, and identify organizations and personnel responsible

for on-site transportation activities. In addition, they address the following issues:

- Development and use of on-site safety methodology.
- Adherence to personnel qualification and training requirements.
- Maintenance of emergency response capabilities.
- Requirements for vehicle operation and maintenance.

4.0 Implementation

LLNL implements its policy for on-site packaging and transportation through the use of internal documents governing these activities such as the *Onsite Hazardous Materials Packaging and Transportation Safety Manual.* LLNL minimizes the effects of possible incidents resulting from the transportation of hazardous materials by

- Adequate containment of hazardous materials, substances, and wastes during each transfer to ensure retention of materials under normal on-site transport operations.
- Adequate communication to personnel who handle the material and to emergency responders so that the hazards of the materials can be assessed quickly.
- Controls, including documented procedures and other administrative and physical controls that
  - — Are appropriate for the level of containment and communication.
  - — Take into account the possibility and consequences of credible accidents.

5.0 Applicable Reference Standards

Elements of the standards listed below that are applicable to on-site operations may be considered source documents or used as guidance.

- State of California Vehicle Code.
- 49 CFR 300-399, "Federal Motor Carrier Safety Regulations," U.S. Department of Transportation.

- 49 CFR 100-199, "Hazardous Material Regulations," U.S. Department of Transportation.
- LLNL, *Onsite Hazardous Material Packaging and Transportation Safety Manual.*
- LLNL, *Environment, Safety & Health Manual,* Volume 1, Chapter 8, "Hazardous Material Control," and Volume 1, Chapter 35, "Vehicle Operations and Traffic."